

# AZSR235/250

## 50 A (35 A) POWER RELAY

### FEATURES

- 50 Amp switching (AZSR250)
- 35 Amp switching (AZSR235)
- Wide contact gap > 1.85mm (AZSR250)
- Wide contact gap > 2.05mm (AZSR235)
- Holding power <100 mW
- Dielectric strength 5000 Vrms
- Isolation spacing greater than 10 mm
- Reinforced insulation, EN 60730-1 (VDE 0631, part 1), EN 60335-1 (VDE 0700, part 1)
- UL, CUR file E44211
- VDE certificate 40033251

**RoHS compliant !**



### CONTACTS

<b>Arrangement</b>	SPST (1 Form A) DPST (2 Form A)
<b>Ratings</b>	Resistive load:  AZSR235 Max. switched power: 1050 W or 9695 VA Max. switched current: 35 A Max. switched voltage: 150 VDC* or 440 VAC  AZSR250 Max. switched power: 1500 W or 13850 VA Max. switched current: 50 A Max. switched voltage: 150 VDC* or 440 VAC  * Note: If switching voltage is greater than 30 VDC, special precautions must be taken. Please contact the factory.
<b>Rated Load UL</b>	AZSR235 35 A at 277 VAC, resistive  AZSR250 50 A at 277 VAC, resistive
<b>VDE</b>	AZSR235 35 A at 263 VAC, test referring to AC-7a, 85°C  AZSR250 50 A at 263 VAC, test referring to AC-7a, 85°C
<b>Material</b>	Silver tin oxide
<b>Resistance</b>	< 50 milliohms initially

### COIL

<b>Power At Pickup Voltage (typical)</b>	270 mW (AZSR250)
<b>Max. Continuous Dissipation</b>	2.0 W at 20°C (68°F) ambient
<b>Temperature Rise</b>	15°C (27°F) at nominal coil voltage
<b>Temperature</b>	Max. 155°C (311°F) Class F

### GENERAL DATA

<b>Life Expectancy</b> <b>Mechanical</b> <b>Electrical</b>	Minimum operations 1 x 10 <sup>6</sup> 5 x 10 <sup>4</sup> at 35 A 250 VAC Res. (AZSR235) 5 x 10 <sup>4</sup> at 50 A 250 VAC Res. (AZSR250)
<b>Operate Time (typical)</b>	40 ms at nominal coil voltage
<b>Release Time (typical)</b>	5 ms at nominal coil voltage (with no coil suppression)
<b>Dielectric Strength (at sea level for 1 min.)</b>	5000 Vrms coil to contact 2500 Vrms between contact sets 2500 Vrms between open contacts
<b>Insulation Resistance</b>	1000 megohms min. at 20°C 500 VDC 50% RH
<b>Insulation (according to DIN VDE 0110, IEC 60664-1)</b>	C250 Overvoltage category: III Pollution degree: 3 Nominal voltage: 250 VAC
<b>Dropout</b>	Greater than 5% of nominal coil voltage
<b>Ambient Temperature Operating</b>	At nominal coil voltage -40°C (-40°F) to 85°C (185°F)
<b>Vibration</b>	0.062" (1.5 mm) DA at 10–55 Hz
<b>Shock</b>	10 g
<b>Enclosure</b>	PA
<b>Terminals</b>	Tinned copper alloy, P.C.
<b>Max. Solder Temp.</b>	270°C (518°F)
<b>Max. Solder Time</b>	5 seconds
<b>Weight</b>	105 grams
<b>Packing unit in pcs</b>	10 per inner carton / 100 per carton box

### NOTES

1. All values at 20°C (68°F).
2. Relay may pull in with less than "Must Operate" value.
3. Specifications subject to change without notice.

**ZETTLER electronics GmbH** - A ZETTLER GROUP Company

Junkersstr. 3, D-82178 Puchheim, Germany

phone: +49 89 800 97-0 office@ZETTLERelectronics.com  
fax: +49 89 800 97-200 www.ZETTLERelectronics.com

This product specification to be used only together with the application notes which can be downloaded from <http://www.ZETTLERelectronics.com/pdfs/relais/ApplicationNotes.pdf>

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## RELAY ORDERING DATA

COIL SPECIFICATIONS - SPST (1 FORM A)					ORDER NUMBER	
Nominal Coil VDC	Must Operate VDC	Min. Holding VDC	Max. Continuous VDC	Coil Resistance Ohm $\pm 10\%$	AZSR235-1A (35 A)	AZSR250-1A (50 A)
5	3.75	1.7	10.0	50	AZSR235-1AE-5D	AZSR250-1AE-5D
9	6.75	3.1	18.0	170	AZSR235-1AE-9D	AZSR250-1AE-9D
12	9.00	4.0	24.0	300	AZSR235-1AE-12D	AZSR250-1AE-12D
18	13.50	6.5	36.0	675	AZSR235-1AE-18D	AZSR250-1AE-18D
24	18.00	8.0	48.0	1200	AZSR235-1AE-24D	AZSR250-1AE-24D

COIL SPECIFICATIONS - DPST (2 FORM A)					ORDER NUMBER	
Nominal Coil VDC	Must Operate VDC	Min. Holding VDC	Max. Continuous VDC	Coil Resistance Ohm $\pm 10\%$	AZSR235-2A (35 A)	AZSR250-2A (50 A)
5	3.75	2.1	10.0	50	AZSR235-2AE-5D	AZSR250-2AE-5D
9	6.75	3.8	18.0	170	AZSR235-2AE-9D	AZSR250-2AE-9D
12	9.00	5.0	24.0	300	AZSR235-2AE-12D	AZSR250-2AE-12D
18	13.50	7.5	36.0	675	AZSR235-2AE-18D	AZSR250-2AE-18D
24	18.00	10.0	48.0	1200	AZSR235-2AE-24D	AZSR250-2AE-24D

## MECHANICAL DATA

Dimensions: 40.0, 25.0, 49.2, 2.0, 4.5

### PC BOARD LAYOUT

Dimensions: 7.0 x 2.5 (4x), 3.3 x 1.3 (2x), 14.7, 10.0, 22.8, 3.5

\*not used on 1 Form A version

Viewed toward terminals

Dimensions: 2.8 x 0.8 (2x), 6.5 x 2 (4x), 8.2, 14.7, 3.5, 22.8, 10.0

\*not used on 1 Form A version

Viewed toward terminals

### WIRING DIAGRAM

\*not used on 1 Form A version

Viewed toward terminals

Dimensions in mm. Tolerance:  $\pm .25$  mm

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